

APPENDIX A

Appendix A shows a comparison of the amino acid sequences of the bifunctional LKR-SDH proteins from *Arabidopsis* and corn, SEQ ID NO:112 and 122, respectively. Amino acids conserved among both sequences are indicated with an asterisk (*) on the top row; dashes are used by the program to maximize alignment of the sequences. The LKR and SDH domains (boxed sequences) were identified by Epelbaum et al. (*Plant Mol. Biol.* 35:735-748 (1997)) and Tang et al. (*Plant Cell* 9:1305-1316 (1997)).

***** ** * ** *****

SEQ ID: 112 MNSNGHEEEKKLGNVVGILSETVNKWERRTPLTPSHCARLLHGG-KDRTGISRIVQPS
SEQ ID: 122 -----CARLLGGGKNGPRVNRIIVQPS

***** ** ***** ** ***** * ** *****

SEQ ID:112	AKRIHHDALYEHVGCEISDDLSDCGLILGIKQPELEMILPERAYAFFSHTHKAQKENMPL
SEQ ID:122	TRRIHHDQYEDAGCEISEDLSGLIIGIKQPKLQMILSDRAYAFFSHTHKAQKENMPL

***** * ***** *** ***** ***** ***** ***** *****	
SEQ_ID_112	LDKILSERVTLC DYELIVGDHGKRLLA FGKYAGRAGLVDFLHGLGQRYLSLGYSTPFLSL
SEQ_ID_122	LDKILEERVSLFDYELIVGDDGKRSLA FGKFA GRAGLIDFLHGLGQRYLSLGYSTPFLSL

LKR domain

SEQ_ID_112	GASYMYSSLAAAKAAVISVGEEIASQGLPLGICPLVFVFTGTGNVSLAQEIFKLLPHTF
SEQ_ID_122	GQSHMYPSLAAAKAAVIVVAEEIATFGLPSGICPIVFVFTGVGNVSQGAQEIFKLLPHTF

SEQ_ID_112	VEPSKLPPELFVKDKGISQNGISTKRQVYQVYGCIIITSQDMVEHKDPSKSFDKADYYAHPEH
SEQ_ID_122	VDAEKLPEIF-QARNLSKQSQSTKRQVYQVYGCIIITSQDMVEHKDPSKSFDKADYYAHPEH

[illegible]

SEQ_ID_112	FVNRATLIDSPFFRFNPSNNSYYDDMDGDGVLCAVDILPTEFAKEASQHFCDILSGFVG
SEQ_ID_122	FINKSTSIERPFRRYDPSKNSYHDDMEGAGVVCLAVDILPTEFSKEASQHFCDILSRLVA

SEQ_ID_112	SLASMTEISDLP HAHL KRACISYRGELTSLEYEYIPMRKSNPEEAQDNIIANGVSSQRTFN
SEQ_ID_122	SLASVKQPAELPSYLRACIAHAGRLTPLYEYIPMRNTMIDLAPAKTNPL---PDKKYS

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*****  **  *****  **  ***  *  *****  **
SEQ_ID_112  ILVLSLGHFLDKFLINEALDMIEAAGGSFHLAKCELGQSADAESYSELEVGADDKRVLDQ
SEQ_ID_122  TLVLSLGHFLDKFLINEALDIIETAGGSFHLVRCVEVGQSTDDMSYSELEVGADDTATLDK

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*****  ***                *          *****  *          *          *****
SEQ_ID_112 IIDSLTRLANPNEDYISPHREANKISLKIGKVQQ-ENEIKEKPEMTTKSGVLILGAGRVC
SEQ_ID_122 IIDSLTSLANEHGGDHDAGQEIE-LALKIGKVNEYETDVTIDKGGPK---ILILGAGRVC

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SEQ_ID_112	RPAADFLASVRTISSQWYKTYFGADSEEKTDVHVIVASLYLKDAKETVEGISDVEAVRL							
SEQ_ID_122	RPAAEFLASYPDICT-----YGVDHDDAQIHVIVASLYQKDAETVDGIENNTATOL							

